

CUMULATIVE AND RESIDUAL EFFECTS OF PHOSPHORUS AND ZINC NUTRIENTS UNDER GERANIUM– RICE (*ORYZA SATIVA*) CROPPING SEQUENCE

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Abstract: A field experiment was conducted at Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow to evaluate the cumulative and residual effects of phosphorus and zinc sources of nutrients under geranium– rice cropping sequence. The treatment involved three cropping system viz geranium paired sole, garlic sole and geranium paired + garlic, three level of phosphorus (0, 40 & 80 Kg P₂O₅/ha) and two levels of zinc (0 and 30 kg ZnSO₄/ha). Results revealed that application of Phosphorus at 40 Kg P₂O₅ ha⁻¹ proved significantly better than control (No Phosphorus) in respect of production of geranium oil and garlic bulbs, further application of 30 kg ZnSO₄ ha⁻¹ significant increased the herb and oil yields of the crop over the no zinc application (control). Residual effects of P and Zn on the grain yield of succeeding rice crop that geranium crop followed by rice, 40 Kg P₂O₅ ha⁻¹ was desirable, particularly in rabi crop season. However application of 30 Kg P₂O₅ ha⁻¹ and 25 kg ZnSO₄ ha⁻¹ to rice grown after geranium was more beneficial.

Keywords: Geranium-rice sequence, Phosphorus & Zinc sources & levels, Cumulative and residual effects

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